

## New record of a great white shark, *Carcharodon carcharias* (Lamnidae) from the eastern Adriatic Sea

by

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**RÉSUMÉ.** - Nouvelle capture d'un grand requin blanc, *Carcharodon carcharias* (Lamnidae) en mer Adriatique orientale.

Une femelle de 570 cm LT de grand requin blanc, *Carcharodon carcharias*, a été capturée le 24 juin 2003 dans une senne à thons, à 15 milles au sud-ouest de l'île de Jabuka en mer Adriatique orientale. C'est le premier signalement de cette espèce en mer Adriatique orientale depuis 1974.

**Key words.** - Lamnidae - *Carcharodon carcharias* - Great white shark - MED - Adriatic - New record.

On 24 June 2003, a female of 570 cm TL of a great white shark, *Carcharodon carcharias* (Linnaeus, 1758) was caught in tuna purse seine, 15 Nm SW off island Jabuka (Fig. 1). Fishing vessel was surrounding a school of bluefin tunas, but before the purse seine was closed, tunas escaped. Afterward, fishermen discovered a great white shark entangled in the purse seine. They tried to haul shark on the stern deck, but they were unable, due to its heavy weight. A larger vessel was called for help and eventually the shark was hauled on deck. Based on derrick possibilities of two vessels, the weight of this shark was estimated to about 2.5 tonnes. The fishermen are included in Large Sharks Monitoring, run by the Institute of Oceanography and Fisheries-Split, so they followed standard procedure: the shark was photographed (Fig. 2) and measured (total length, TL). Tooth samples from upper and lower jaws were taken and deposited in private fisherman collection (Fig. 3). Due to its great size, it was not possible to preserve the specimen in the vessel's fish hold, so it was discarded to sea.

The great white shark is one of the three species of the family Lamnidae reported in the Adriatic (Jardas, 1996). It is primarily a

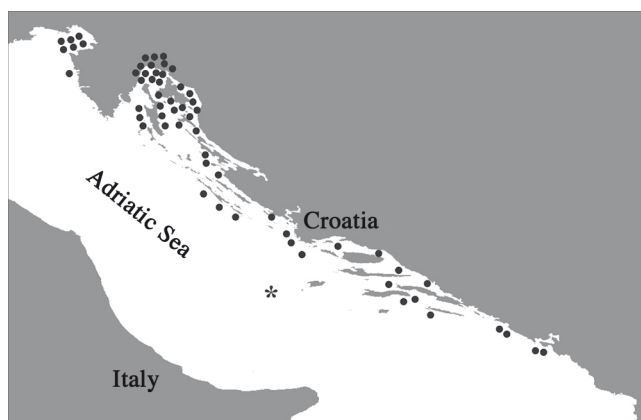


Figure 1. - Great white shark records in the Eastern Adriatic: in the period 1868-1974 (●) and the new record (\*). [*Captures de grands requins blancs en Adriatique orientale : période 1868-1974 (●) et nouvelle capture (\*)*.]



Figure 2. - Female great white shark caught in tuna purse seine in the Eastern Adriatic. [*Femelle de grand requin blanc capturée dans une senne à thons en Adriatique orientale*.]

coastal and offshore inhabitant of the continental and insular shelves (Compagno, 1984). In last decades of XIX<sup>th</sup> century and first decades of XX<sup>th</sup> century, the great white sharks were regularly reported along the coast of the Eastern Adriatic Sea. Afterwards, records declined. The last record of this species in the Eastern Adriatic was reported in 1974 when a fatal attack on human occurred (Soldo and Jardas, 2002a). From 1868 to 1974, a total of 61 records were documented (Soldo and Jardas, 2002a).

Soldo and Jardas (2002b) suggested that apparent lack of records, since 1974, was related to the decline of tuna abundance in coastal waters of the Eastern Adriatic. Absence of great marine

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Figure 3. - Tooth from the upper left jaw of female 570 cm TL great white shark from the Eastern Adriatic Sea. [*Dent de la mâchoire supérieure gauche d'une femelle de grand requin blanc de 570 cm TL, capturée en Adriatique orientale.*]

mammals in the Eastern Adriatic placed tunas as a mayor prey for the great white shark. The greatest number of great white sharks was recorded in the Kvarner Gulf, which was the area of the most intensive tuna fishing. In the 70s of the xx<sup>th</sup> century, intensive tuna fishing started offshore in the Adriatic Sea, which caused the decline of tunas populations in the coastal waters of the Eastern Adriatic and the disappearance of the great white shark (Soldo and Jardas, 2002b). At the same time, in the late 70s, disappearance of great white sharks was noted in the area of Balearic Islands, and this was also related to decline of the tuna stock due to the introduction of purse seining (Morey *et al.*, 2003). Similar relationships between tunas and great white shark were noted in other areas of

the Mediterranean, such as in the Ligurian Sea (Boero and Carli, 1979) and Northern Tyrrhenian Sea (Vacchi *et al.*, 2002). Although the level of great white shark dependency on tunas is arguable, previous data, and this new record, prove the high relationships between these two species in the Eastern Adriatic, and more generally in the Mediterranean Sea.

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